



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

20NR-49
Job Sheet 191269



Part No: 20NR-49

Job Qty: 6 pcs

Part Name: Stiffener - 2 Hole



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/25/19

Job Tracking No:

Due Date: 5/10/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 20NR-49 Rev. 2 IPP Rev. A 18.06.15 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Conventional Mill - 1	6 pcs	5/10/19		0.00	0.60	Conventional Mill - 1		
							Conventional Mill - 2		
120	QC 2	6 pcs	5/10/19		0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 54		
							QC 2 - 56		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		



Container No: S170044



Part: 20NR-49

Job No: 191269

Serial No/Batch: S170044

Revision: 2

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 04/05/19

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APR 18 2019

130 QC 8	6 pcs	5/10/19	0.00 0.00	QC 2 - 66	
				QC 2 - 64	
				QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
				QC 8 - 47	
135 Outsource - 1 - Heat Treat	6 pcs	5/10/19	0.00 0.00		04/09/2019 PL
140 Outsource - 13 - Zinc Plating	6 pcs	5/10/19	0.00 0.00		04/16/2019 PL
150 Packaging 2-1 - Receive - B4B	6 pcs	5/10/19	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	

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				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
160 QC 6	6 pcs	5/10/19	0.00 0.00	QC 6 - 42	DAS 40
				QC 6 - 9	MAY 01 2019 9-89
				QC 6 - 68	DAS 21 MAY 03 2019 9-89
				QC 6 - 61	DAS 28
Part Op 110 - (Manufacture as per dwg)Cut blanks to 9.10" 1-Machine as per DWG. 2-Deburr Descriptions: 120 - (QC2- Inspect parts off machine FAI/FAIB 130 - (QC8- Inspect parts - second check)Engrave BATCH number using MARKTRONIC engraver as per DWG. 135 - (Outsource process - Heat Treat)1-Issue P/O to Metcore ; P/O 043155 RC; 45-50 2-Bead blast 3-Material; 4140 4- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER Metcore to ship directly to Groupe Altech*** 140 - Outside Processing - Zinc Plating)-Issue P/O to GROUPE ALTECH: P/O 043337 -Zinc plate, ASTM B633 TYPE 2 SC2 -Color; yellow -Material type; 4140 -Certificate of Conformity is required 150 - (Receive & Inspect for Damage & Mat'l Certs) 160 - (QC6- All purchased or subcontracted products)					
Job BOM					
Part / Item	Component Name	Quantity	Operation	Container	
MT-4140-B-1.000X1.000	4140 Steel Bar 1.000 X 1.000	4.5600 ft (.76 ea)	110-Conventional Mill - 1	5077651	
Job Allocations					
Operation	Component Part	Required	Inventory	Allocated	
110-Conventional Mill - 1	MT-4140-B-1.000X1.000	5	60	0	
Part Specifications					
Specifications could not be found.					

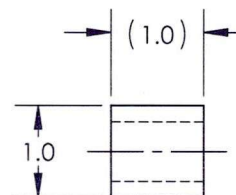
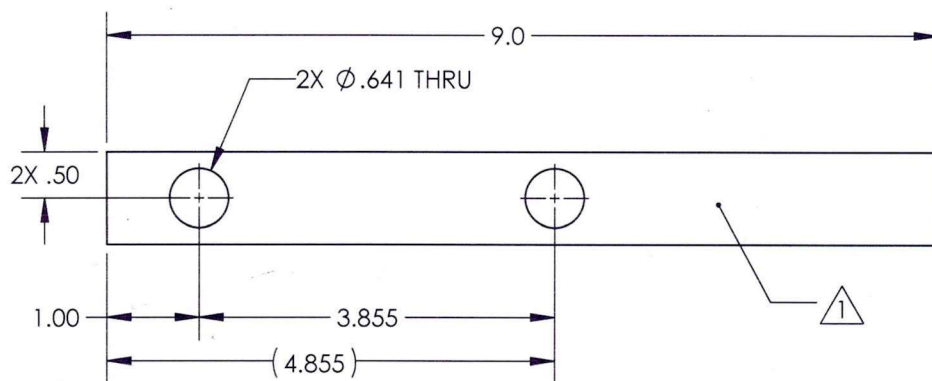
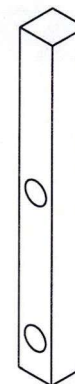
Plex 2/25/19 3:21 PM Dart.lajeunesse.marie

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
1		AS DRAWN BY CANAM	7/18/2013	CFS
2	14-0101	CH'D TITLE BLOCK WAS RED BARN IS DART. ADDED MACHINE ENGRAVE NOTE.	7/30/2014	DJN

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 191269 MJS

19-02-26



NOTE:

1 MACHINE ENGRAVE BATCH NUMBER.

DART AEROSPACE	
TITLE STIFFENER - 2 HOLE	
DWG NO. 20NR-49	REV 2
MAT'L 4140	DRAWN BY: CANAM
* UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XX ± .005	FRACTIONS ± 1/32
.XX ± .01	ANGLES ± 5°
.X ± .1	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	HEAT TREAT RC 45-50
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	FINISH CAD PLATE YELLOW
SPEC QQ-P-416F, TYPE II, CLASS II	
USED ON MODEL	
SCALE 1:2	DATE 12/1/1995
SHEET 1 OF 1	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			20NR-49	1	STIFFENER - 2 HOLE	4140	1 X 1 X 9-1/8

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐					
Date :	Sequence #:	QTY Affected :		MRB (QSI042)			
Description Work Order Deviation		Disposition			Completed By		
					Lead hand / Supervisor		
					QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread					
Other/Details:							



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043155



Supplier: ATL002-VC
Atlantic Heat Treat 2001
401 Frankcom
Ajax
ON
L1S 1R4 Canada
Phone: 866 257 6395

Attention: Ananth, Nimmy

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO043155

PO Date: 4/9/19

Due Date: 4/19/19

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Phone:

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	191269	20NR-49	Stiffener - 2 Hole (Outsource process - Heat Treat)1--Issue P/O to Metcore ; P/O RC; 45-50 2-Bead blast 3-Material; 4140 4- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER Metcore to ship directly to Groupe Altech*** PLEASE SHIP TO GROUP ALTECH FEDEX Stiffener - 2 Hole Outside Processing - Zinc Plating)-Issue P/O to GROUPE ALTECH: P/O -Zinc plate, ASTM B633 TYPE 2 SC2 -Color; yellow -Material type; 4140 -Certificate of Conformity is required	Firmed	-	4/19/19	6 pcs	0 pcs	6 pcs	\$14.1666/pcs	\$85.00

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Line Item Note PLEASE SHIP TO GROUP ALTECH AFTER HEAT TREAT



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Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043155



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2	192483	20NR-62	Roller 1-Issue P/O; RC 47-50 2-Bead blast 3-Material type; 4140 4- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER HEAT TREAT to ship directly to SURFACE FINISH*** PLEASE SHIP TO GROUP ALTECH Roller -Issue P/O; -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004-.0006 -Bake after plating -Material type; 4140 -Certificate of Conformity is required	Firmed	-	4/19/19	16 pcs	0 pcs	16 pcs	\$5.3125/pcs	\$85.00
Line Item Note PLEASE SHIP TO GROUP ALTECH AFTER HEAT TREAT											
											Grand Total: \$170.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 4/18/19 8:21 AM dart.Lussier.Patrick

Atlantic Heat Treating (2001) Ltd

Order No.: 165165

Ship Date: 11/4/2019

Shipping Ticket

Sold To: 1448**DART AEROSPACE LTD.**
1270 ABERDEEN ST

HAWKESBURY ON K6A 1K7

Page 1 of 1

Ship To: 162124**DART AEROSPACE LTD.**
1270 ABERDEEN ST

HAWKESBURY ON K6A 1K7

Purchase Order Number	Packing List No	Customer Job No	Route	Carrier
PO043155				

Quantity	Part No. / Part Name / Part Description	Pounds
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6 PCS MATERIAL 4140
SANDBLAST AND HEAT TREAT TO 45-50RC
C OF C, PRT# 20NR-49, JOB# 191269

Container Type	# Of Containers	Cust Cont Id	Container Type	# Of Containers	Cust Cont Id
BOX	1				

NOTICE: OUR LIABILITY IS LIMITED TO OUR INVOICE CHARGES ONLY

Shipped Complete

Quantity Shipped: 6

Pounds Shipped: 14.00

Order No.: 165165

Shipped Complete

Quantity Shipped: 6.00

Received By:

Date:

Pounds Shipped: 14.00

Sold To: DART AEROSPACE LTD.

Shipped ON: 04/11/2019

Certification

Date: 04/15/2019

Entry Date: 04/11/2019

Page: 1 of 1

To:DART AEROSPACE LTD.
1270 ABERDEEN ST

Purchase Order No.: PO043155

Packing List No.:

HAWKESBURY ON K6A 1K7

Material: 4140

We are pleased to provide you with the following Certificate of Compliance.

Quantity	Part Number / Part Name / Part Description	Pounds
6	6 PCS MATERIAL 4140 SANDBLAST AND HEAT TREAT TO 45-50RC C OF C, PRT# 20NR-49, JOB# 191269	14

Insp. Type	Scale	Minimum	Maximum	Number	Other
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Customer Requirements:

Harden rockwell

Results:

Harden ROCKWE	45.	50.	49. TESTED AS PER SAMPLING PLAN
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HEAT TREATED TO 49 RC AS PER CUSTOMER REQUEST

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STATEMENT OF LIMITED LIABILITY (PLEASE READ CAREFULLY): ALL WORK IS ACCEPTED SUBJECT TO THE FOLLOWING CONDITIONS: It is recognized that even after employing all the scientific methods known to us, hazards still remain in metal treating. THEREFORE, OUR LIABILITY SHALL NOT EXCEED TWICE THE AMOUNT OF OUR CHARGES FOR THE WORK DONE ON ANY MATERIAL (FIRST TO REIMBURSE FOR THE CHARGES AND SECOND TO COMPENSATE IN THE AMOUNT OF THE CHARGES), EXCEPT BY WRITTEN AGREEMENT SIGNED BY THE METAL TREATER. THE CUSTOMER, BY CONTRACTING FOR METAL TREATMENT, AGREES TO ACCEPT THE LIMITS OF LIABILITY AS EXPRESSED IN THIS STATEMENT TO THE EXCLUSION OF ANY AND ALL PROVISIONS AS TO LIABILITY ON THE CUSTOMER'S OWN INVOICES, PURCHASE ORDERS OR OTHER DOCUMENTS. IF THE CUSTOMER DESIRES HIS OWN PROVISIONS AS TO LIABILITY TO REMAIN IN FORCE AND EFFECT, THIS MUST BE AGREED TO IN WRITING, SIGNED BY AN OFFICER OF THE TREATER. IN SUCH EVENT, A DIFFERENT CHARGE FOR OUR SERVICES REFLECTING THE HIGHER RISK TO TREATER, SHALL BE DETERMINED BY THE TREATER AND CUSTOMER. THE TREATER MAKES NO EXPRESS OR IMPLIED WARRANTIES AND SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF THE FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, AS TO THE PERFORMANCE OF CAPABILITIES OF THE MATERIAL AS HEAT TREATED, OR THE HEAT TREATMENT. THE AFOREMENTIONED LIMITATION OF LIABILITY STATED ABOVE IS SPECIFICALLY IN LIEU OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND OF ANY OTHER SUCH OBLIGATION ON THE PART OF THE TREATER. No claim for shortage in weight or count will be entertained unless presented within five (5) working days after receipt of materials by customer. No claim will be allowed for shrinkage, expansion, deformity, or rupture of material in treating or straightening, except by prior written agreement, as above, nor in any case for rupture caused by or occurring during subsequent grinding. Whenever we are given material with detailed instructions as to treatment, our responsibility shall end with the carrying out of those instructions. Failure by a customer to indicate plainly and correctly the kind of material (i.e., proper alloy designation) to be treated, shall cause an extra charge to be made to cover any additional expense incurred as a result thereof, but shall not change the limitation of liability stated above. Customer agrees there will be no liability on the treater in contract for any special, indirect or consequential damages arising whatsoever, including but not limited to personal injury, property damage, loss of profits, loss of production, recall or any other losses, expenses or liabilities allegedly occasioned by the work performed on the part of the treater. It shall be the duty of the customer to inspect the merchandise immediately upon its return, and in any event claims must be reported prior to the time that any further processing, assembling or any other work undertaken. OUR LIABILITY TO OUR CUSTOMERS SHALL CEASE ONCE ANY FURTHER PROCESSING, ASSEMBLING OR ANY OTHER WORK HAS BEEN UNDERTAKEN ON SAID MATERIAL. No agent or representative is authorized to alter the above conditions, except by writing duly signed by an officer of treater.


KEAN SHEPHERD
QUALITY CONTROL

ATLANTIC HEAT TREATING 2001 LTD



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043237



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO043237
PO Date: 4/18/19
Due Date: 4/26/19
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Via: Ground
Pymt Terms: Net 60
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	190619	20NR-49	Stiffener - 2 Hole Outside Processing - Zinc Plating)-Issue P/O to GROUPE ALTECH: P/O -Zinc plate, ASTM B633 TYPE 2 SC2 -Color; yellow -Material type; 4140 -Certificate of Conformity is required	Firmed	-	4/26/19	4 pcs	0 pcs	4 pcs	\$9.00/pcs	\$36.00
				XY		APR 26 2019			DP		
	191269	DP	XE	APR 26 2019	Firmed	4/26/19	6 pcs	0 pcs	6 pcs	\$9.00/pcs	\$54.00
Sub Total:							10	0	10		\$90.00

Grand Total: \$90.00

DAS
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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO043237



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

A handwritten signature in black ink, likely belonging to Patrick Lussier, is written over the bottom right of the Order Notes section.

Plex 4/23/19 2:08 PM dart.Lussier.Patrick



Certificat de Conformité / Certificate of Compliance

(018665-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
Tel: 514-335-3666 Fax: 514-335-3868
www.groupealtech.com

Bon de Livraison / Packing Slip

018665- 1

Livré à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON, K6A1K7
CANADA
Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON, K6A1K7
CANADA
BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
25-Apr-2019		Jessie Boisvert		043237				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	20NR-49 Rev.	20NR-49 01 -ZINC-YELLOW [ZINC YELLOW] OLD YELLOW CHROMATE, 96 hours ASTN B633 TYPE 2 SC2	ZINC CH	4	4	0	0	0
2	20NR-49 Rev.	20NR-49 01 -ZINC-YELLOW [ZINC YELLOW] OLD YELLOW CHROMATE, 96 hours ASTN B633 TYPE 2 SC2	ZINC CH	6	6	0	0	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.